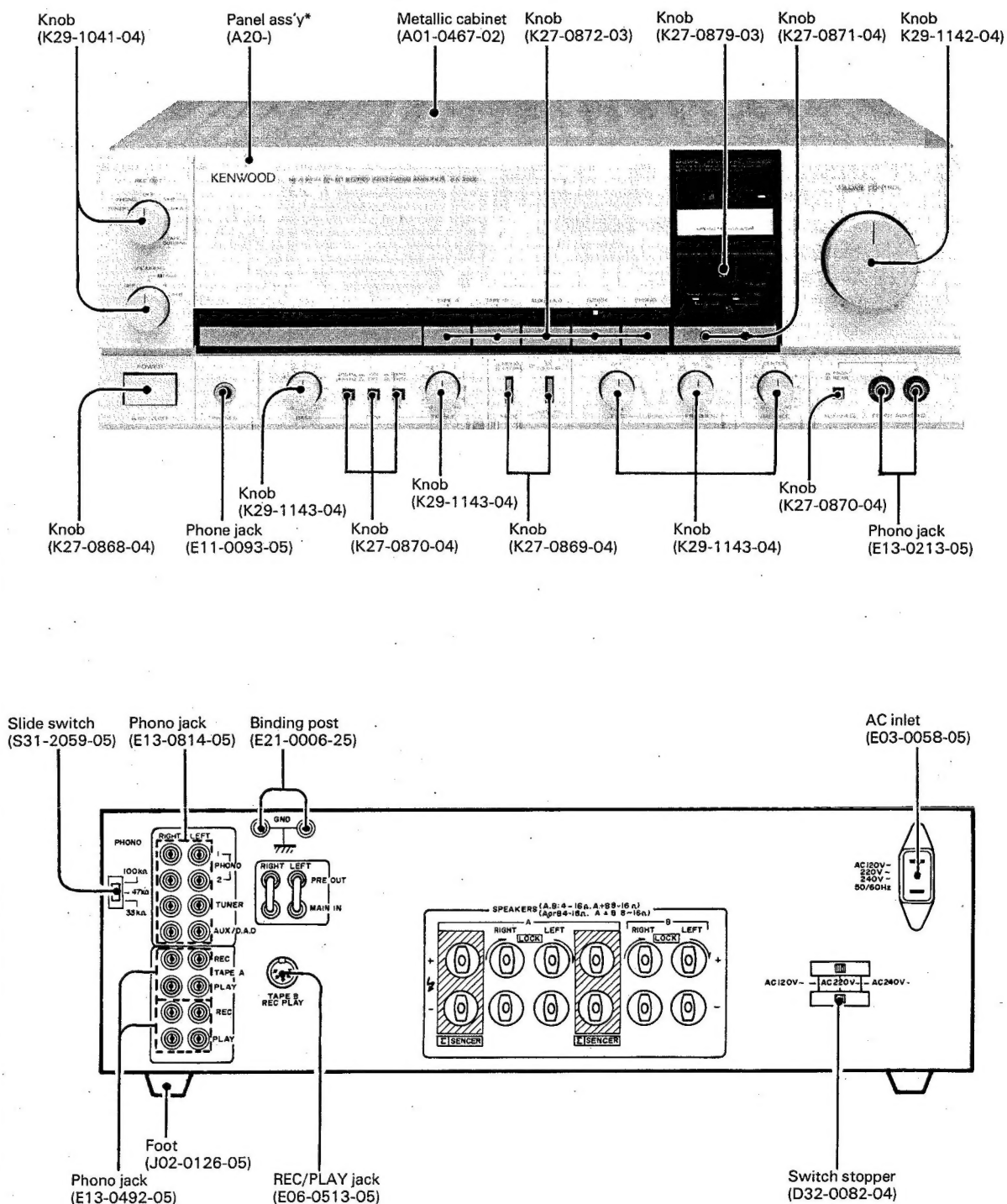


KENWOOD KA-2200

NEW HIGH SPEED STEREO INTEGRATED AMPLIFIER



*Refer to Parts List on page 11.
Photo is E type.

DISASSEMBLY FOR REPAIR

1. Fader pc board (X11 A/6) can be removed without removing the panel ass'y. When replacing the components on the pc boards, it is recommended to remove the panel ass'y before disassembly. The other pc boards can be removed, all attached to the sub panel, by the following procedures.

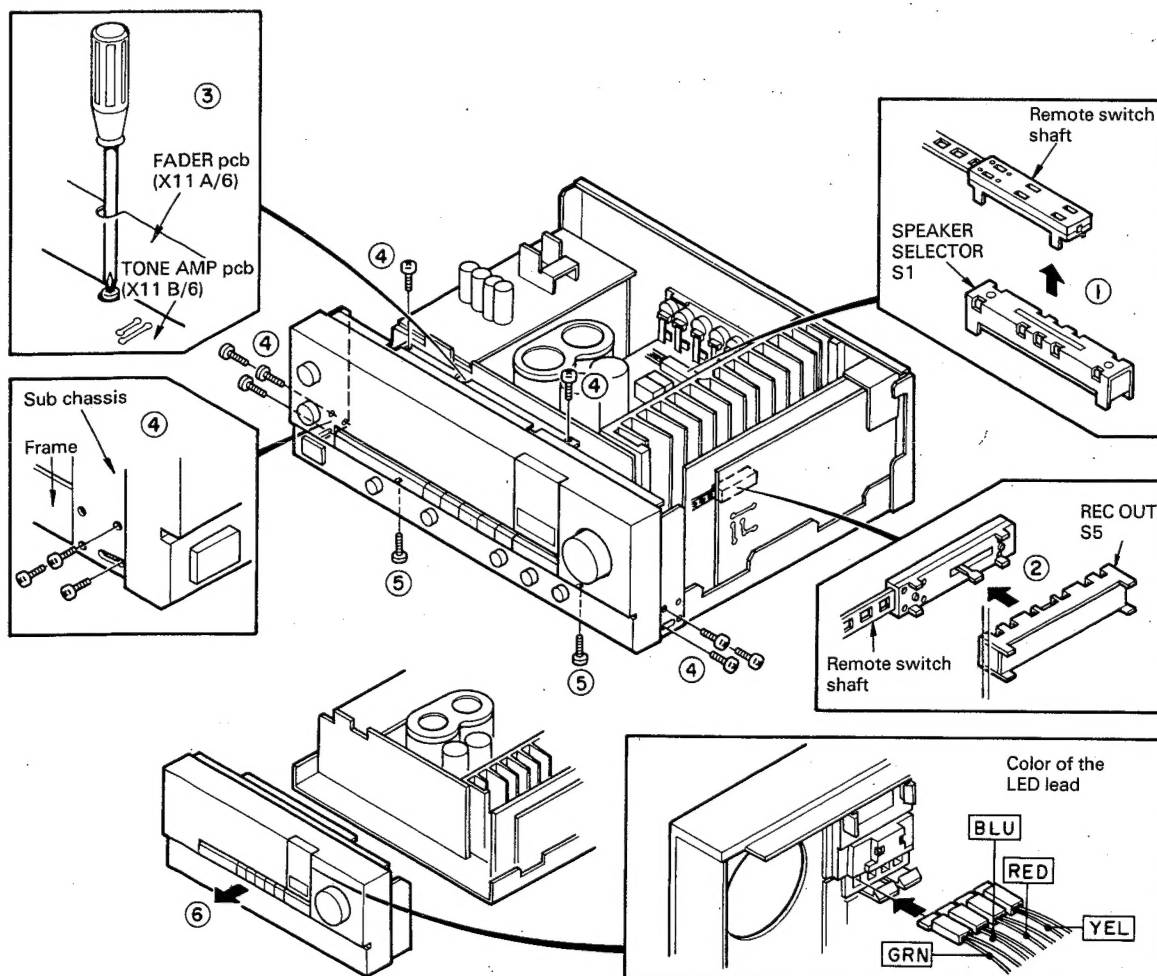
In the figure below, the panel ass'y is kept on to show that disassembly can be done without removing panel ass'y.

2. Pull the remote switch shaft of SPEAKER selector S1 and REC OUT selector S5 up to disengage them from the switches (①, ②).

NOTE: Do not change the position of the selector knobs after removing the remote switch shaft. If changed, either the remote switch shaft can not be plugged in or the position of the switch and the selected indication on the panel ass'y will not match. Also, be careful of the remote switch shaft. If the covering of the remote switch shaft (the blue plastic part) breaks, the switch can not be operated.

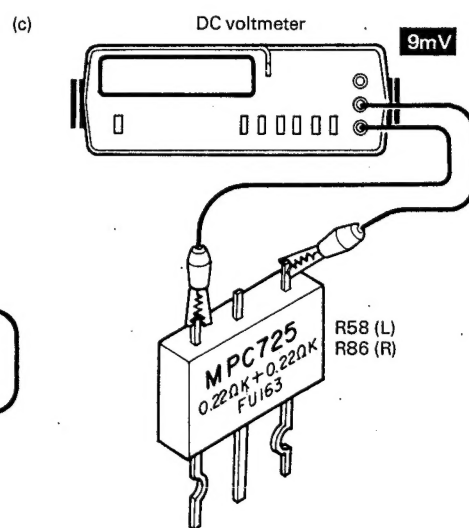
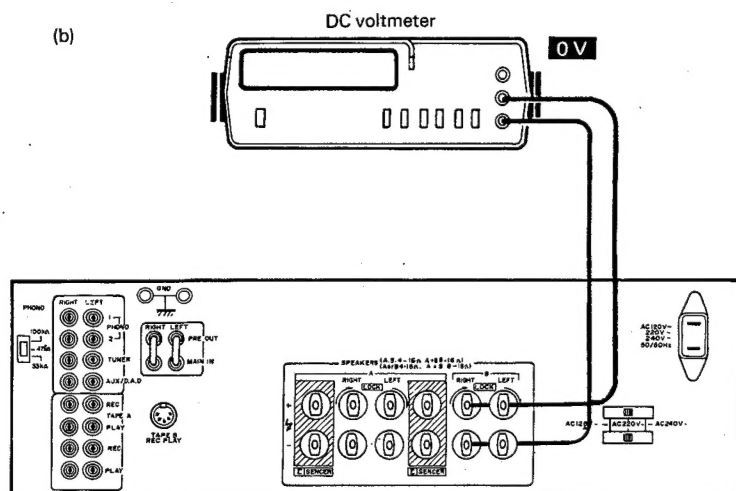
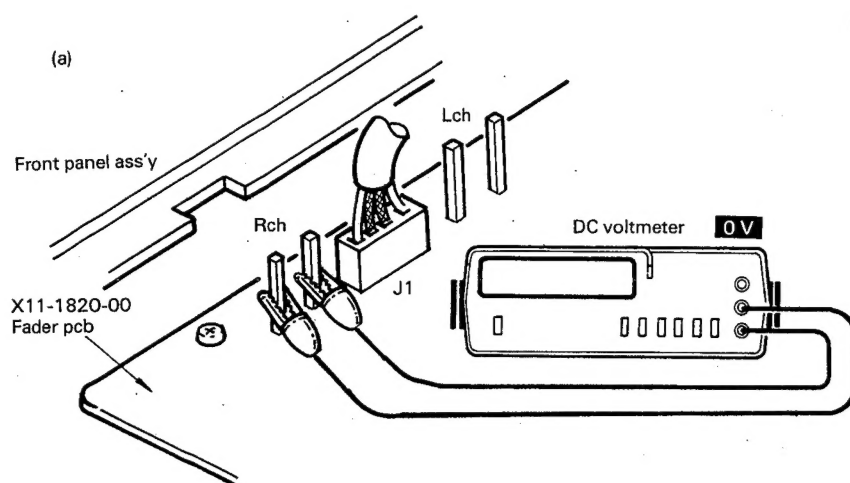
3. Insert a screw driver through the round cutting of FADER pc board (X11 A/6) and remove the screw on the TONE AMP pc board (X11 B/6) (③).
4. Remove 2 backmost screws on the FADER pc board and 6 screws on the sides of the sub panel (④).
5. Remove 2 screws right behind the panel ass'y on the bottom plate (⑤).
6. In this condition, the following pc boards will be separated all attached to the sub panel.

The pc boards are, FADER (X11 A/6), FADER SWITCH (X11 D/6), VOLUME (X11 C/6), PHONO 1/2, MM/MC SWITCH (X08 B/10), SELECTOR (X08 C/10), TONE AMP (X11 B/6), HEADPHONE (X08 H/10), FRONT/REAR AUX/DAD (X11 E/6, F/6).



ABGLEICH

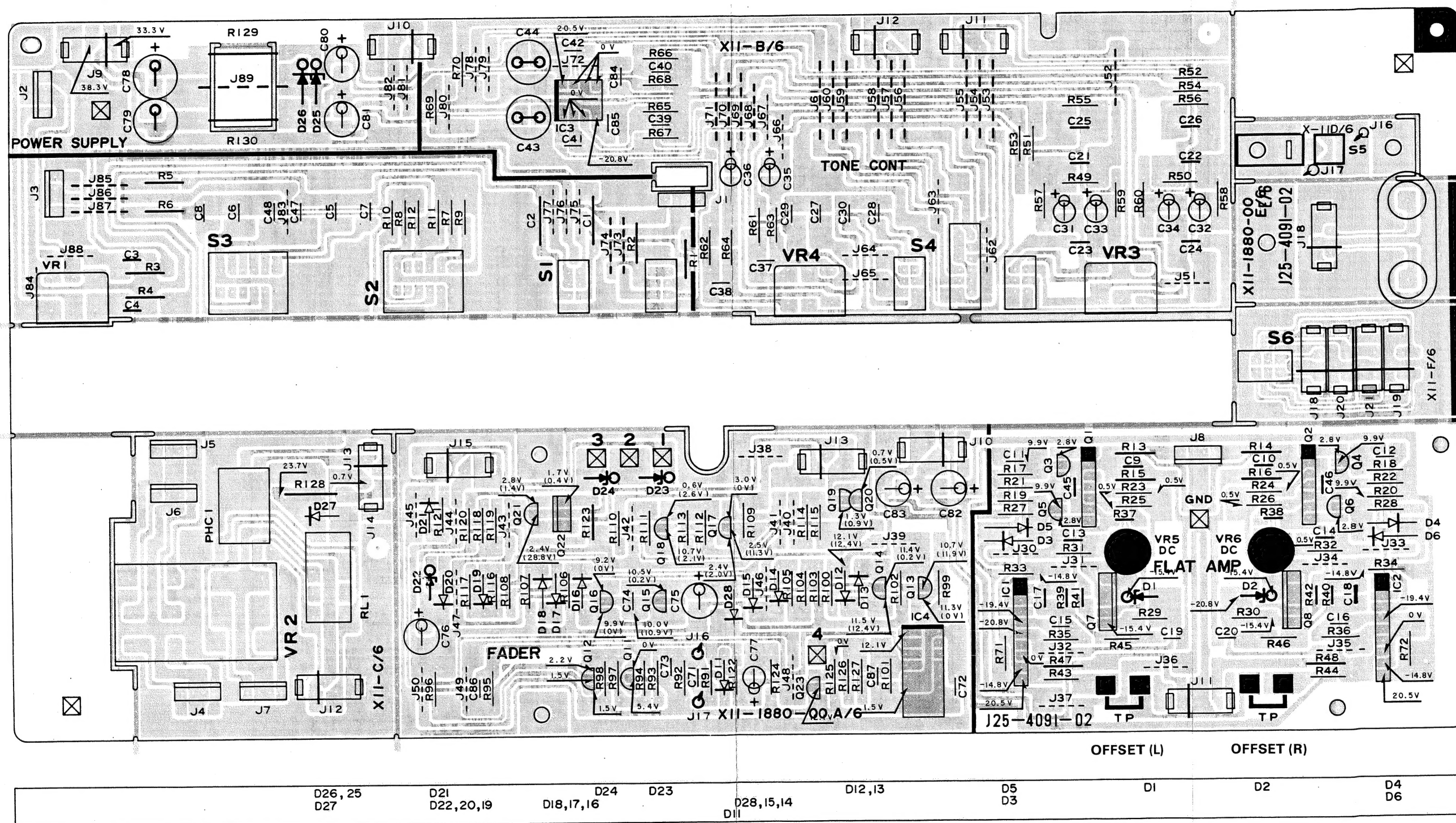
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANG-EINSTELLUNG	VORSTÄRKER-EINSTELLUNG	ABGLEICHE-PUNKTE	ABGLEICHEN FÜR	ABB.
Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SPEAKER: B REC OUT: OUT SELECTOR: PHONO							
1	OFFSET (X11-1882-71)	—	Einen Gleichspannungsmesser über TP von X11 A/6 anschließen.	MM/MC: MM	VR5 (L) VR6 (R)	0V	(a)
2	OFFSET (X07-2032-71)	—	Einen Gleichspannungsmesser über SPEAKER B anschließen.	VOLUME: 0	VR1 (L) VR2 (R)	0V	(b)
3	LEERLAUF-STROM	—	Einen Gleichspannungsmesser über R85 (L) R86 (R)	VOLUME: 0	VR3 (L) VR4 (R)	9 mV	(c)



KA-2200 KA-2200

PC BOARD

CONTROL (X11-1882-71) Component side view



In this model, there are separated pc boards which were originally one. These separated pc boards can't be supplied independently.

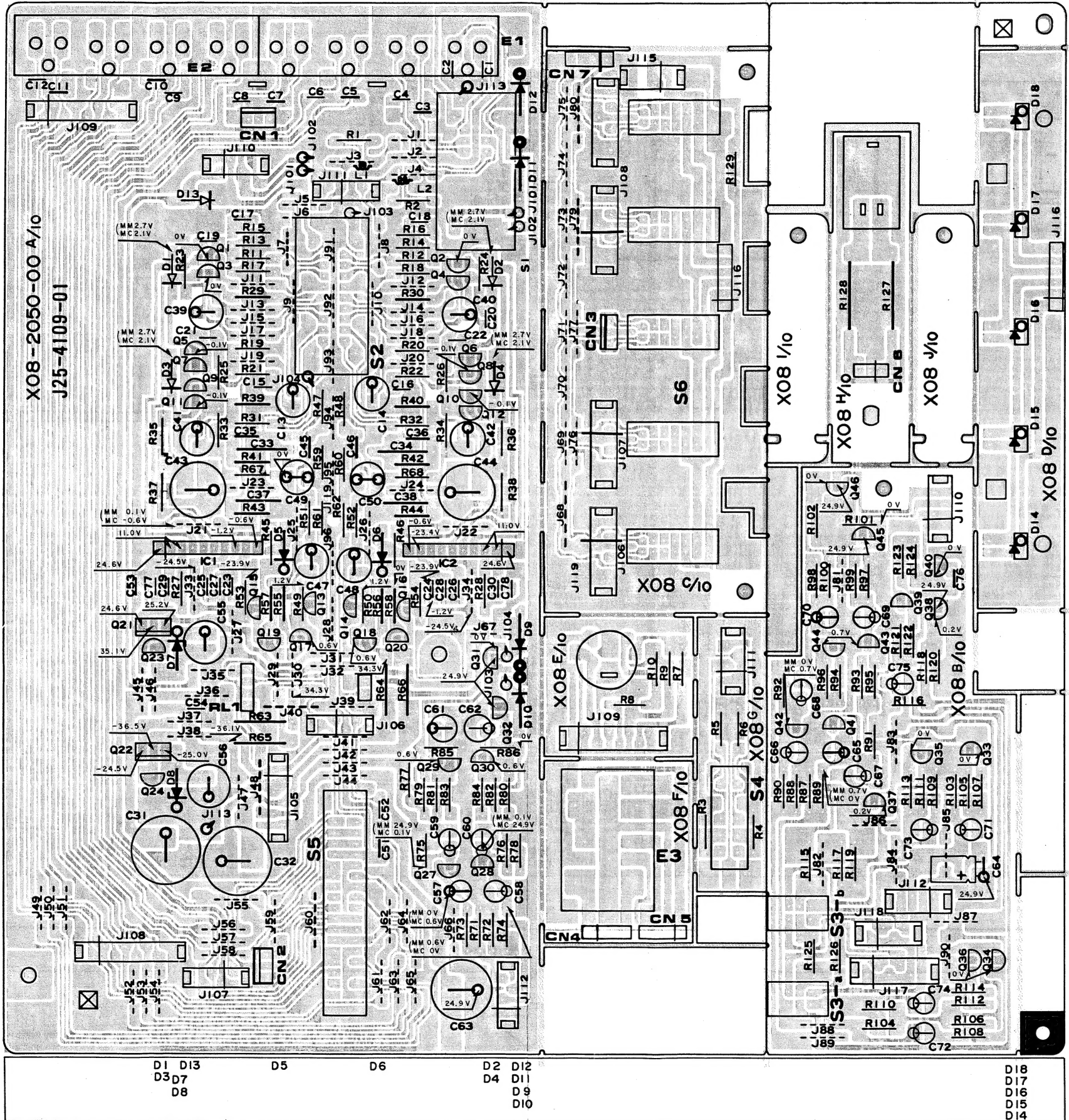
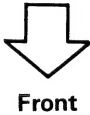
Ex.	Part No. of pc board	Separated portion No.
	X09-1230-00	(A/3)
	X09-1230-00	(B/3)
	X09-1230-00	(C/3)

In the example shown above, separated portion can't be ordered independently. In case only A/3 was ordered, pc board ass'y of X09-1230-00, which all A/3, B/3, C/3 included, will be shipped.

Refer to the schematic diagram for the values of capacitors and resistors.
The PC board drawing is viewed from the side easy to check.

PC BOARD

PREAMP
(X08-2052-71)
Component side view

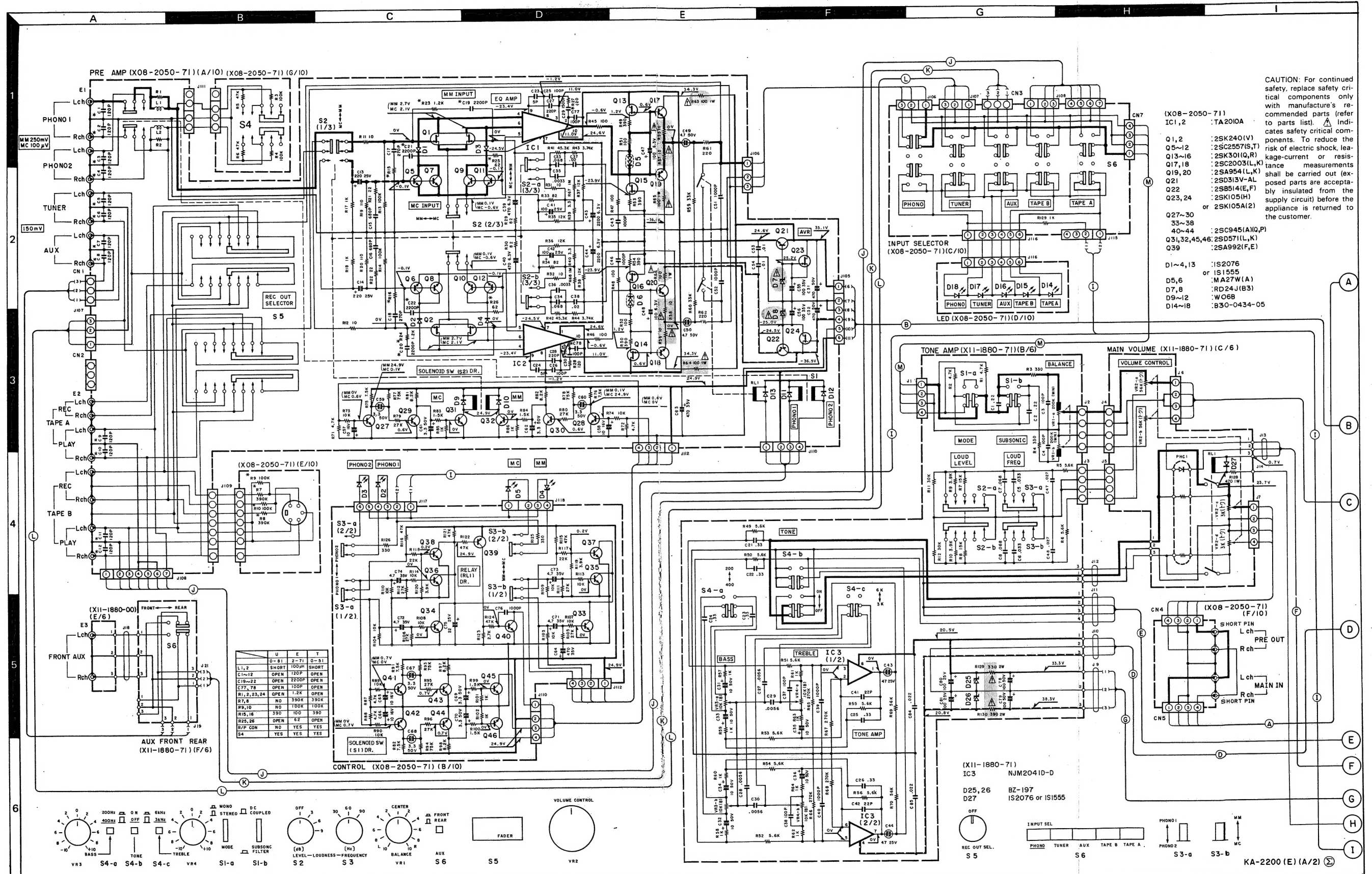


In this model, there are separated pc boards which were originally one. These separated pc boards can't be supplied independently.

Ex.	Part No. of pc board	Separated portion No.
	X09-1230-00	(A/3)
	X09-1230-00	(B/3)
	X09-1230-00	(C/3)

In the example shown above, separated portion can't be ordered independently. In case only A/3 was ordered, pc board ass'y of X09-1230-00, which all A/3, B/3, C/3 included, will be shipped.

Refer to the schematic diagram for the values of capacitors and resistors.
The PC board drawing is viewed from the side easy to check.



2SA954
2SA992
2SC2003
2SC945

2SD571

2SB514
2SC2557
2SD313V-AL

2SK105
2SK105A
2SK301

2SK240

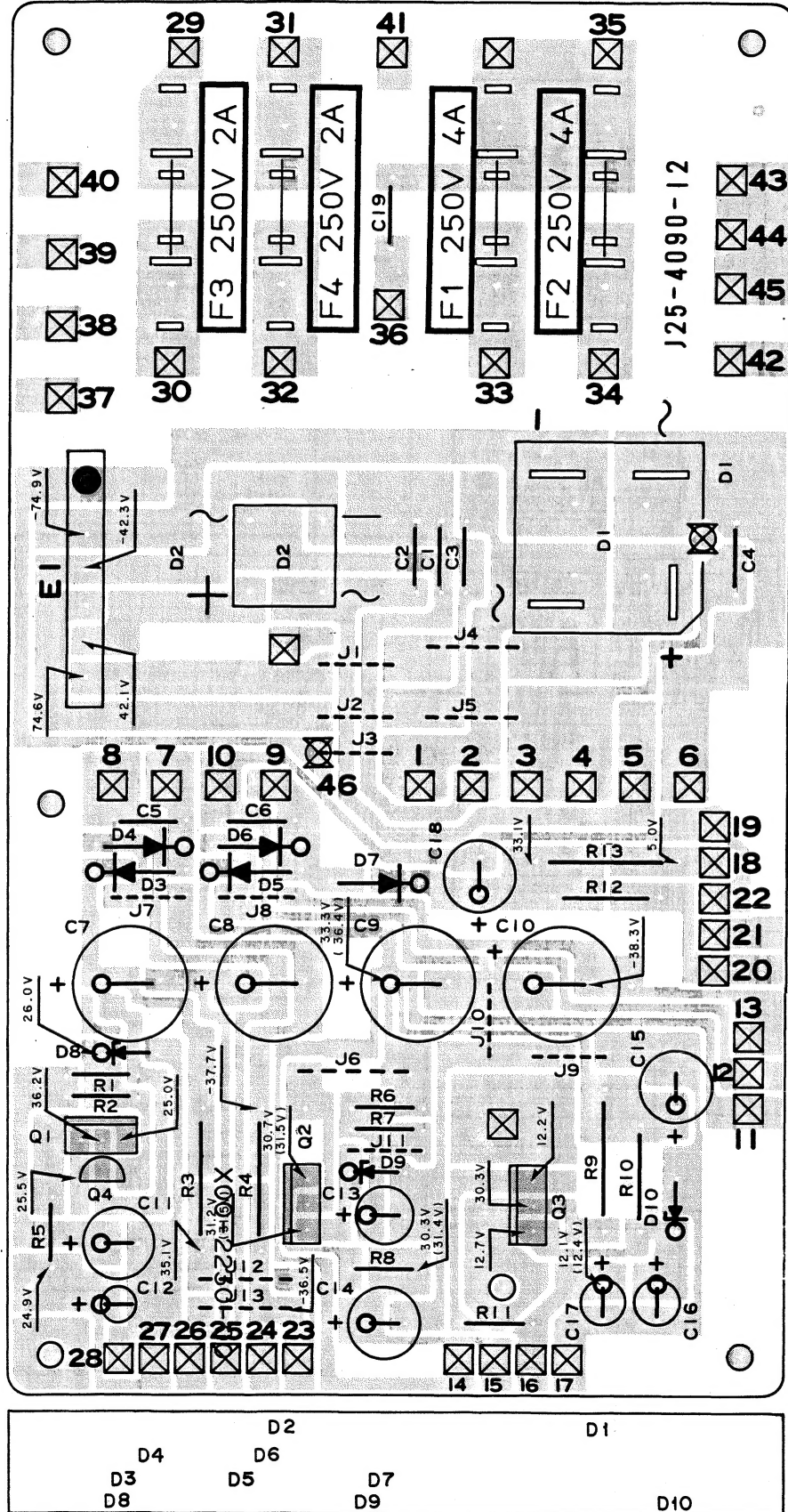
NJM2041D-D

TA2010A

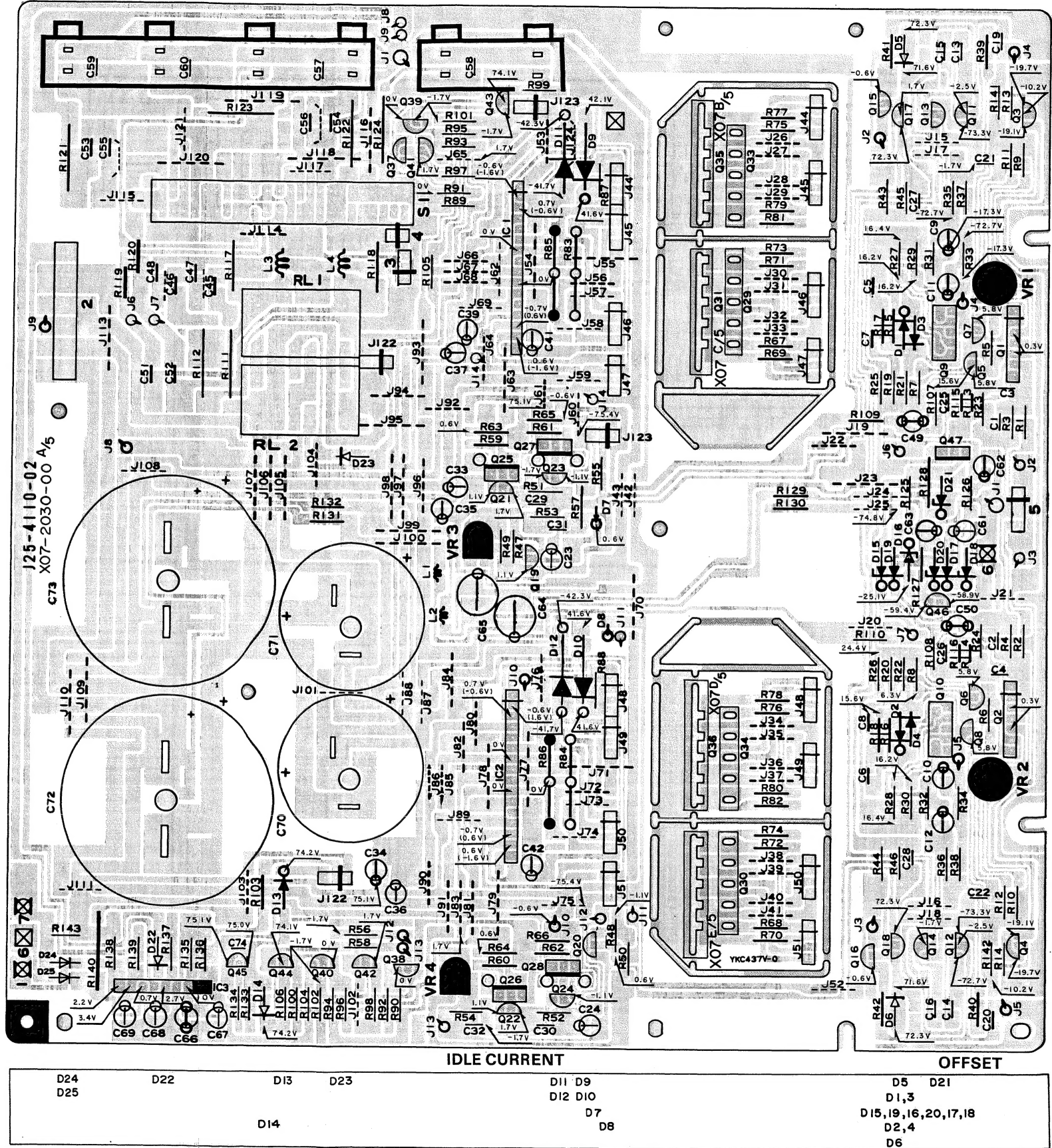
DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

PC BOARD

POWER (X00-2232-71) Component side view



POWER AMP (X07-2032-71) Component side view

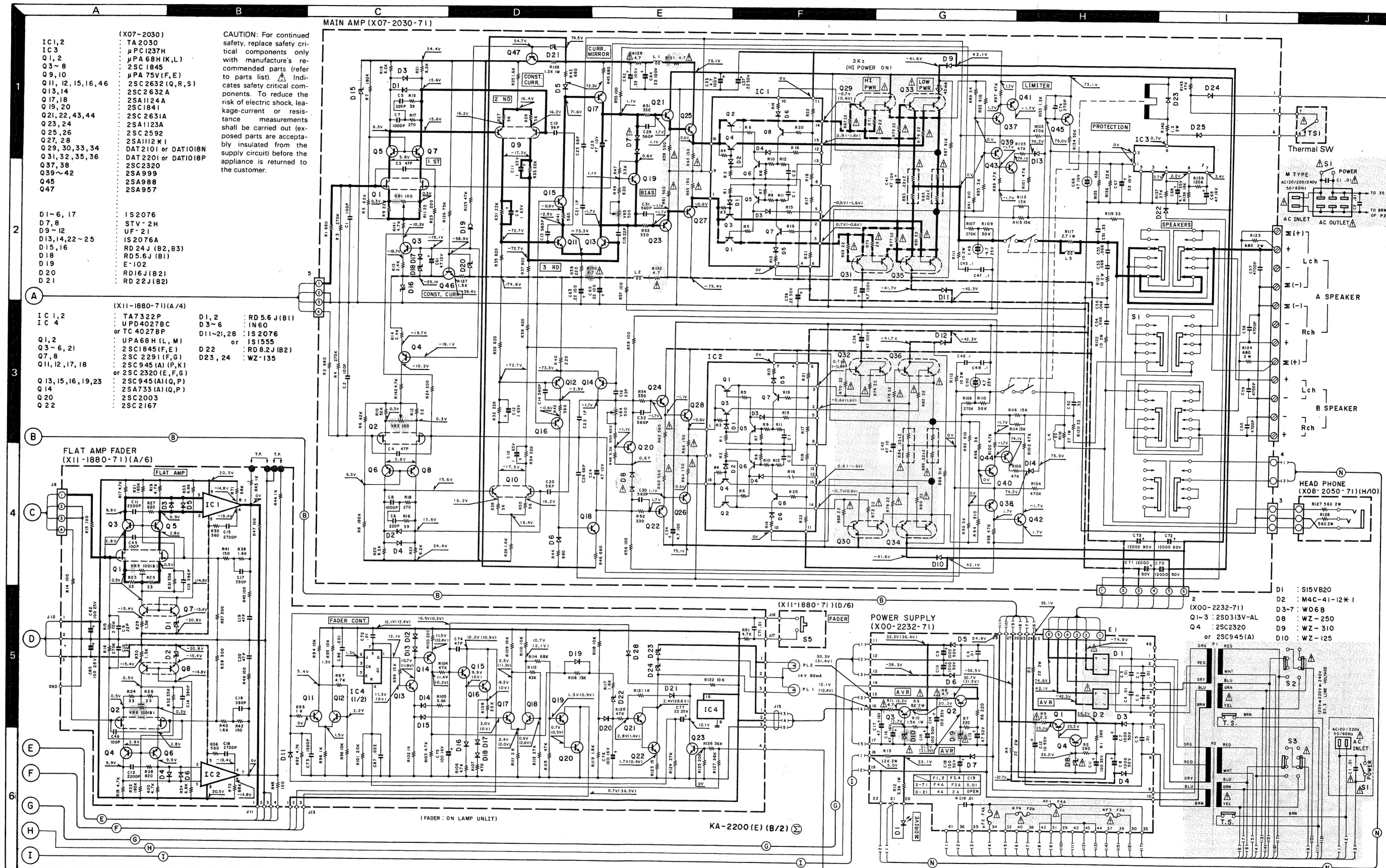


In this model, there are separated pc boards which were originally one. These separated pc boards can't be supplied independently.

Ex.	Part No. of pc board	Separated portion No.
	X09-1230-00	(A/3)
	X09-1230-00	(B/3)
	X09-1230-00	(C/3)

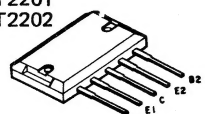
In the example shown above, separated portion can't be ordered independently. In case only A/3 was ordered, pc board ass'y of X09-1230-00, which all A/3, B/3, C/3 included, will be shipped.

Refer to the schematic diagram for the values of capacitors and resistors. The PC board drawing is viewed from the side easy to check.



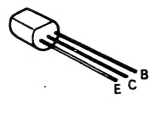
DAT1015N
DAT1015P
DAT1018N
DAT1018P
DAT2101
DAT2102

DAT2201
DAT2202

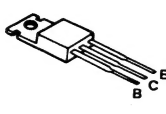


2SA1123A
2SA1124A
2SA733
2SA988
2SA999
2SC1841

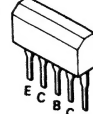
2SC1845
2SC2320
2SC2631A
2SC2632A
2SC945
2SC2003



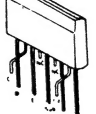
2SA1112
2SA957
2SC2167
2SC2592
2SC2632
2SD313V-AL



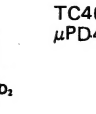
2SC2291



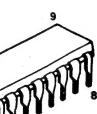
μPA75V



μPA68H



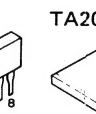
TC4027BP
μPD4027BC



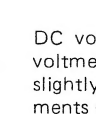
TA7322P



μPC1237H



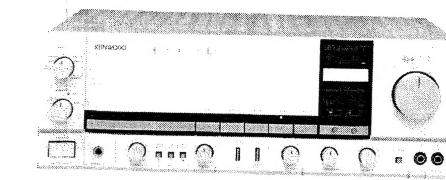
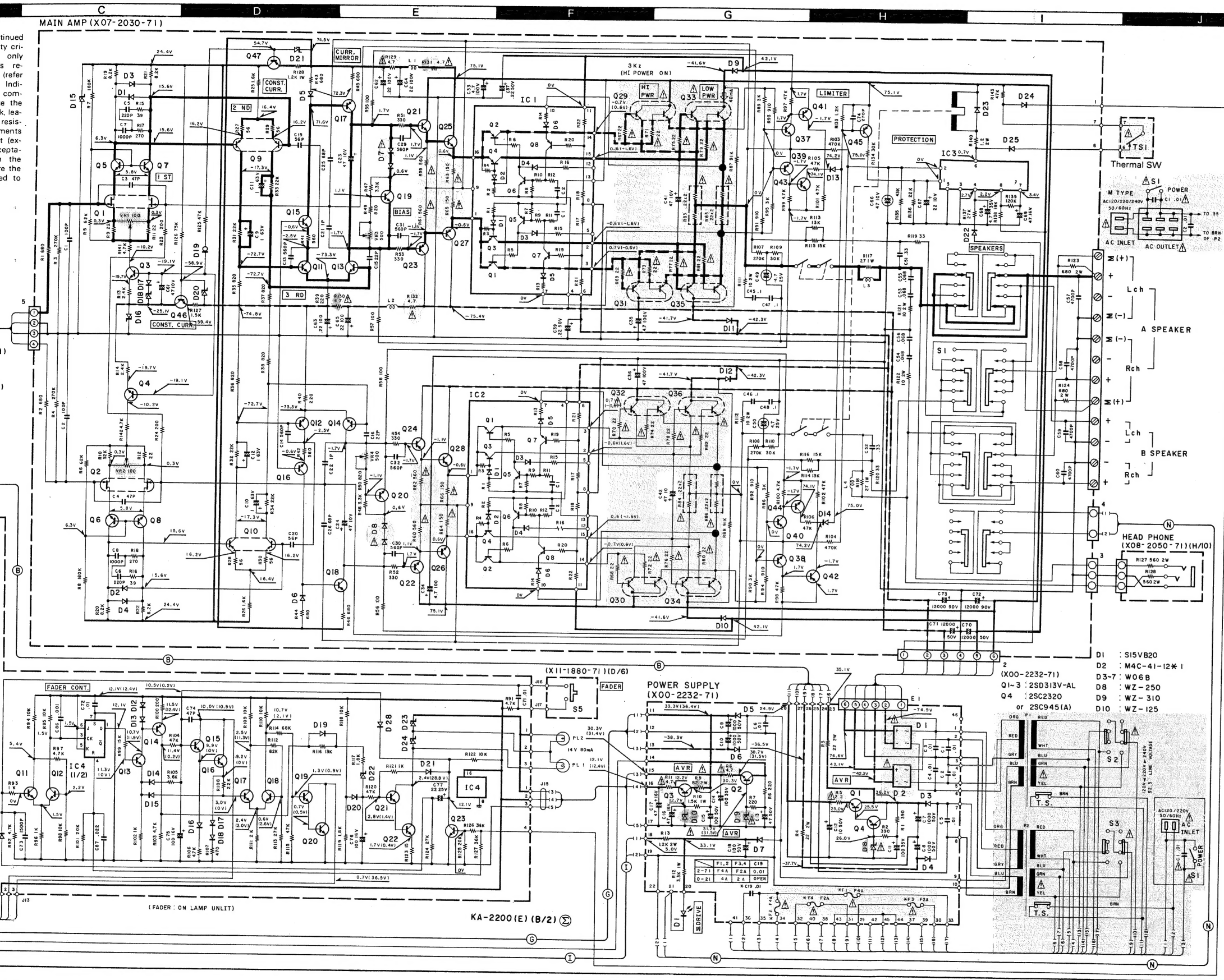
TA2030



DC voltages are as
voltmeter with nc
slightly due to var
ments or/and units.

STEREO INTEGRATED AMPLIFIER

KA-2200



SPECIFICATIONS

Total Harmonic Distortion (20 Hz to 20,000 Hz)	
AUX input to SPEAKER output	0.003% at rated power into 8 ohms 0.003% at 1/2 rated power into 8 ohms
PHONO input to SPEAKER output	
Intermodulation Distortion	0.005% at rated power with VOLUME -20 dB 0.003% at rated power into 8 ohms
(60 Hz: 7 kHz = 4 : 1)	
Damping Factor	1,000 at 100 Hz
Transient Response	
Rise Time	1.7 μs
Slew Rate	± 100 V/μs
Frequency Response	
(DC COUPLED at ON)	DC to 200 kHz, +0 dB, -3 dB
(DC COUPLED at OFF)	DC to 200 kHz, +0 dB, -3 dB
Speaker Impedance	Accept 4 ohms to 16 ohms
Input Sensitivity/Impedance	
Phono (MM)	2.5 mV/33 kohms, 47 kohms and 100 kohms
Phono (MC)	0.1 mV/100 ohms
Tuner, AUX, Tape A, B	150 mV/47 kohms
Signal to Noise Ratio (IHF.A)	
Phono (MM)	88 dB for 2.5 mV input 94 dB for 5.0 mV input 100 dB for 10 mV input
Phono (MC)	70 dB for 0.1 mV input 76 dB for 0.2 mV input 110 dB for 150 mV input
Tuner, AUX, Tape A, B	
Maximum Input Level	260 mV (RMS), T.H.D. 0.003% at 1,000 Hz
Phono (MM)	10 mV (RMS), T.H.D. 0.003% at 1,000 Hz
Output Level/Impedance	
Tape REC (Pin)	150 mV/220 ohms
(DIN)	30 mV/80 kohms
Phono Frequency Response	
	RIAA standard curve ± 0.2 dB (20 Hz to 20 kHz)
Tape Control	
Bass Turnover Freq.	200 Hz
	± 10 dB at 50 Hz
	± 10 dB at 100 Hz
Treble Turnover Freq.	
	3 kHz
	± 10 dB at 10 kHz
	± 10 dB at 20 kHz
Loudness Control (at -40 dB VOLUME Level)	
	30 Hz
	+3/6/9 dB
	60 Hz
	+3/6/9 dB
	90 Hz
	+3/6/9 dB
Subsonic Filter	
	18 Hz, 6 dB/oct
GENERAL	
Power Requirements	
	50 Hz 220V...European Model, 50 Hz 240V...UK Model, or 50/60 Hz
	110-120/220-240V (switchable)
Power Consumption	
	900W at Rated Output at 8 ohms
A.C. Outlet	
	Switched 2, Unswitched 1
Dimensions	
	W 440 mm (17-5/16")
	H 158 mm (6-7/32")
	D 383 mm (15-3/32")

845
320
631A
632A
45
003

2SA1112
2SA957
2SC2167
2SC2592
2SC2632
2SD313V-AL

2SC2291

μPA75V

μPA68H

TC4027BP
μPD4027BC

TA7322P

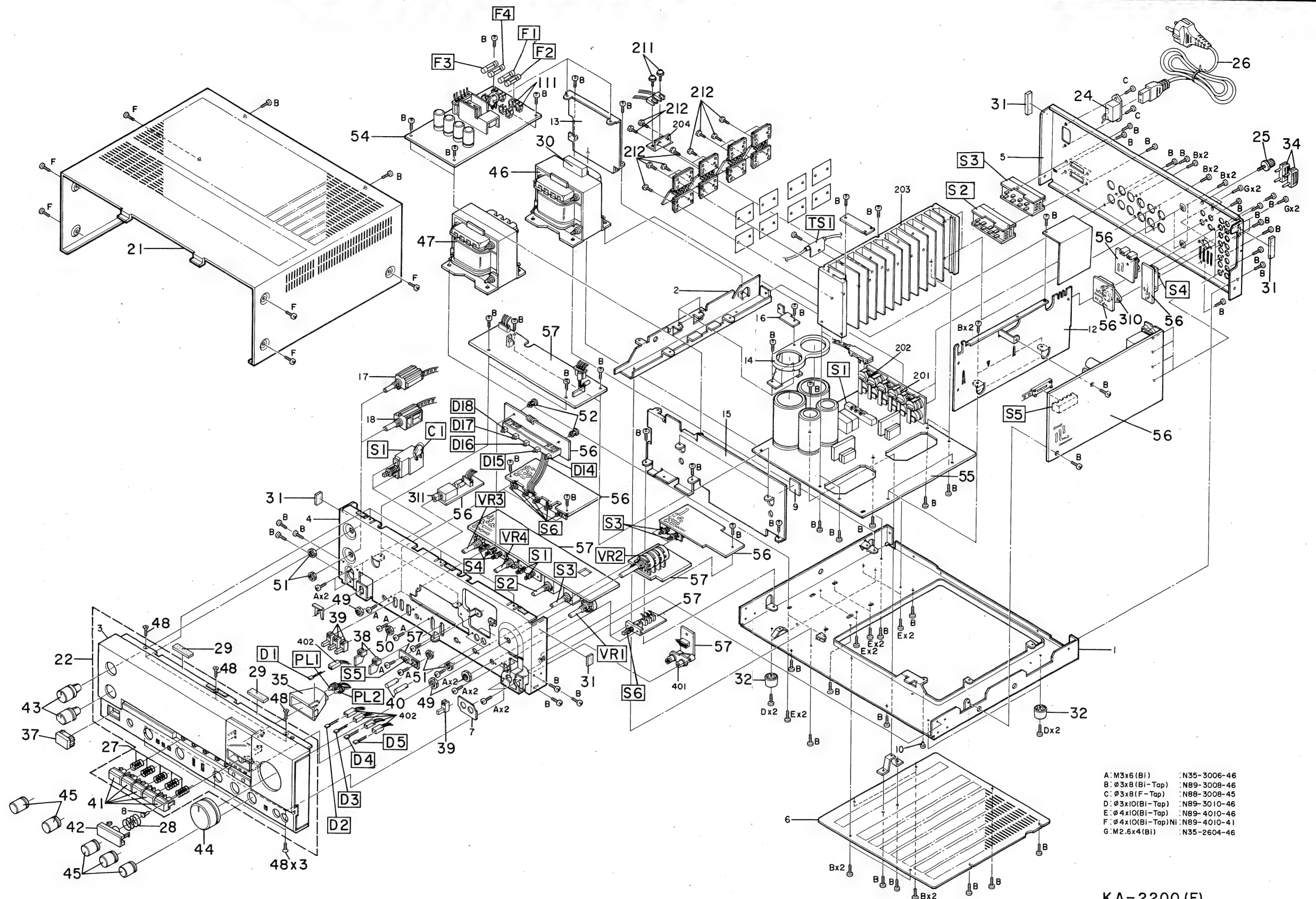
μPC1237H

TA2030

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

EXPLODED VIEW

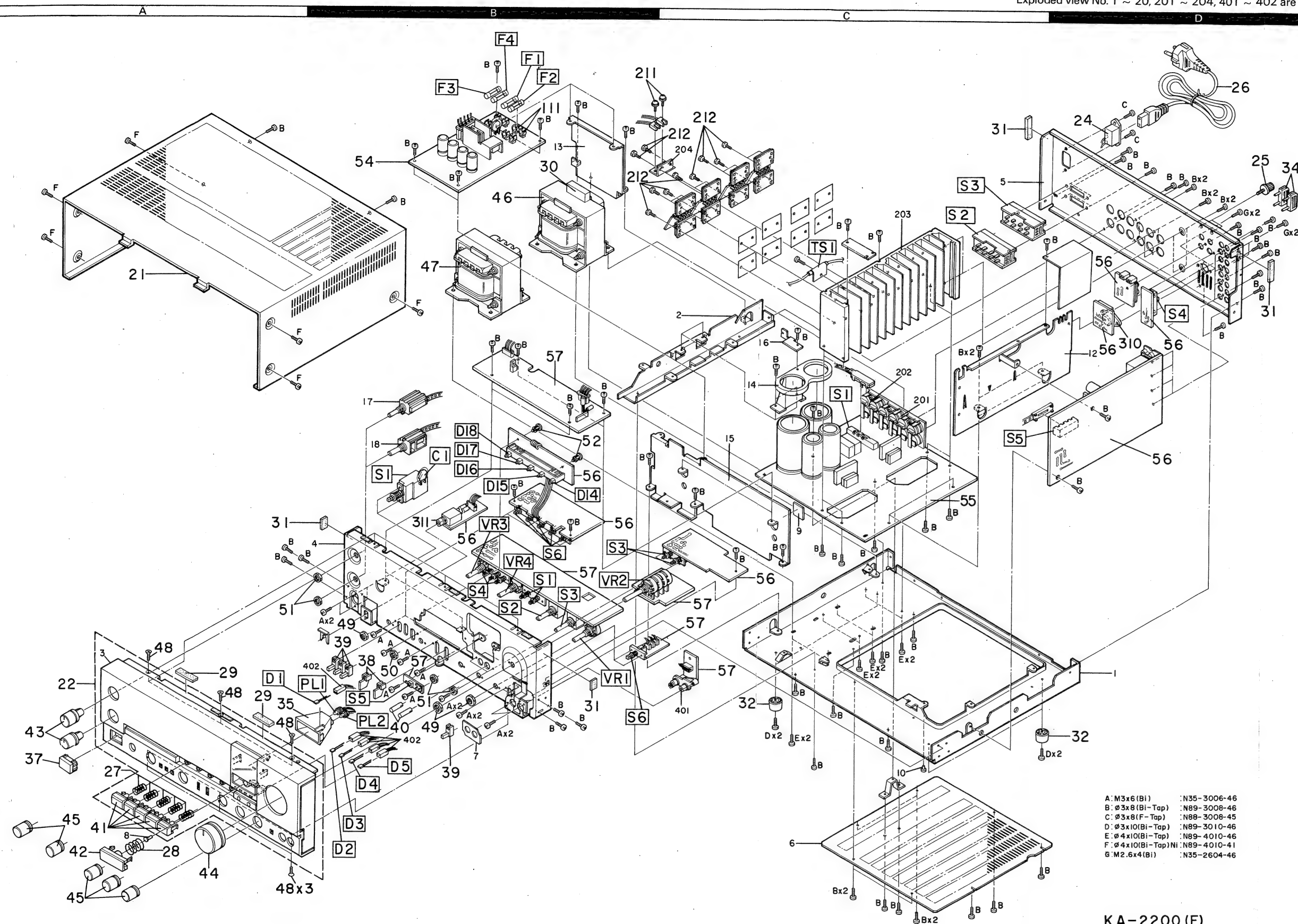
Exploded view No. 1 ~ 20, 201 ~ 204, 401 ~ 402 are not supplied



KA-2200 (E)

EXPLODED VIEW

Exploded view No. 1 ~ 20, 201 ~ 204, 401 ~ 402 are not supplied.



A: M3x6 (Bl)	N35-3006-46
B: Ø3x8 (Bl-Tap)	N89-3008-46
C: Ø3x8 (F-Tap)	N88-3008-45
D: Ø3x10 (Bl-Tap)	N89-3010-46
E: Ø4x10 (Bl-Tap)	N89-4010-46
F: Ø4x10 (Bl-Tap) Ni	N89-4010-41
G: M2.6x4 (Bl)	N35-2604-46

KA-2200 (E)

PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
KA-2200						
21	1A	*	A01-0467-02	METALLIC CABINET		
22	3A	*	A20-3381-01	PANEL ASSY	UMHUE	
22	3A	*	A20-3381-01	PANEL ASSY	XE	
22	3A	*	A20-3382-01	PANEL ASSY	T	
-			B46-0094-03	WARRANTY CARD	UHUE	
-			B46-0095-03	WARRANTY CARD	UHUE	
-			B46-0096-03	WARRANTY CARD	X	
-			B46-0097-03	WARRANTY CARD	T	
-			B46-0098-03	WARRANTY CARD	E	
-		*	B50-4588-00	INSTRUCTION MANUAL (ENGLISH)	UMHUE	
-		*	B50-4588-00	INSTRUCTION MANUAL (ENGLISH)	X	
-		*	B50-4589-00	INSTRUCTION MANUAL (FRENCH)	MX	
-		*	B50-4590-00	INSTRUCTION MANUAL (SPANISH)	M	
-		*	B50-4591-00	INSTRUCTION MANUAL (ENGLISH)	T	
-		*	B50-4592-00	INSTRUCTION MANUAL (4-LINGUAL)	E	
-			B59-0092-00	SERVICE DIRECTORY	UHUE	
D1 -5	3A,3B		B30-0321-05	LED(PR7531K) (SIGMA DR,PH0N01)		
PL1 ,2	3A,3B	*	B30-0433-15	LAMP 14V 0.08A (FADER)		
△ C1			C91-0079-05	CERAMIC 0.01UF AC125V	TE	
△ C1 ,2	2B,1D		C91-0023-05	CERAMIC 0.01UF AC250V	UMHUE	
△ C1 ,2	2B,1D		C91-0023-05	CERAMIC 0.01UF AC250V	X	
△ 23	1D		E03-0007-05	AC OUTLET	UMHUE	
△ 23	1D		E03-0007-05	AC OUTLET	X	
△ 24	1D		E03-0058-05	AC INLET		
25	1D		E21-0006-25	BINDING POST (GND)		
△ 26	1D		E30-0726-05	AC POWER CORD (INLET)	E	
△ 26	1D		E30-0728-05	AC POWER CORD (INLET)	T	
△ 26	1D		E30-0729-05	AC POWER CORD (INLET)	X	
△ 26	1D		E30-0733-05	AC POWER CORD (INLET)	UMHUE	
27	3A		G01-0488-04	COMPRESSION SPRING (SELECTOR)		
28	3A		G01-0489-04	COMPRESSION SPRING (FADER)		
29	3A		G10-0057-04	NON-WOVEN FABRIC		
30	1B		G11-0145-04	SOFT TAPE 40X16X12		
31	1D,3B		G11-0192-04	CUSHION 40X8X2		
-		*	H01-4701-04	ITEM CARTON CASE	T	
-		*	H01-4702-04	ITEM CARTON CASE	UMHUE	
-		*	H01-4702-04	ITEM CARTON CASE	XE	
-			H10-1631-02	POLYSTYRENE FOAMED FIXTURE		
-			H10-1632-02	POLYSTYRENE FOAMED FIXTURE		
-			H20-0453-04	PROTECTION COVER		
-			H25-0078-04	PROTECTION BAG 235X315		
-		*	H25-0204-04	PROTECTION BAG		
32	3C,3D		J02-0126-05	FOOT		
34	1D	*	J12-0091-05	SHORTING PIN (PRE OUT/MAIN IN)		
35	3A		J19-0658-04	HOLDER (LAMP)	TE	
-			J61-0045-15	WIRE BAND		
-			J61-0307-05	WIRE BAND		
37	3A		K27-0868-04	KN0B(BUTTON) (POWER)		
38	3B		K27-0869-04	KN0B(BUTTON) (MODE,SUBSONIC)		
39	3B		K27-0870-04	KN0B(BUTTON) (TURN0VER,T0NE)		
39	3B		K27-0870-04	KN0B(BTN) (AUX/DAD FRONT/REAR)		
40	3B		K27-0871-04	KN0B(BUTTON) (MM/MC,PH0N0 1/2)		

E: Scandinavia & Europe H:Audio Club K: USA

P: Canada

△ indicates safety critical components.

S: South Africa

T: England

U: PX(Far East, Hawaii)

UE : AAFES(Europe)

X: Australia

M: Other Areas

PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
41	3A		K27-0872-03	KNØB(BUTTON) (IN PANEL ASSY)		
42	3A	*	K27-0879-03	KNØB(BUTTON) (FADER)		
43	3A		K29-1041-04	KNØB (REC OUT, SPEAKERS)		
44	3A		K29-1142-04	KNØB (VOLUME CONTRØL)		
45	3A		K29-1143-04	KNØB (BASS, TREBLE, LOUD, BAL)		
△ 46	1B	*	L01-2916-05	POWER TRANSFORMER		
△ 47	1B	*	L01-2926-05	POWER TRANSFORMER		
48	3A		N09-1277-05	SCREW (φ3X8 F-TAP) PANEL ASSY		
52	2B		N29-0035-05	PUSH RIVET φ3.5X5.5		
△ S1	2B		S40-1014-05	PUSH SWITCH (POWER TYPE)	UMHUE	
△ S1	2B		S40-1014-05	PUSH SWITCH (POWER TYPE)	X	
△ S1	2B		S40-1047-05	PUSH SWITCH (POWER TYPE)	TE	
△ S2 .3	1C		S31-2046-05	SLIDE SWITCH (POWER TYPE)		
54	1B	*	X00-2230-21	POWER SUPPLY UNIT	UMHUE	
54	1B	*	X00-2230-21	POWER SUPPLY UNIT	X	
54	1B	*	X00-2232-71	POWER SUPPLY UNIT	TE	
55	2C	*	X07-2030-00	POWER AMPLIFIER UNIT	UMHUE	
55	2C	*	X07-2030-00	POWER AMPLIFIER UNIT	XT	
55	2C	*	X07-2032-71	POWER AMPLIFIER UNIT	E	
56	2B-D	*	X08-2050-51	PREAMPLIFIER UNIT	T	
56	2B-D	*	X08-2050-81	PREAMPLIFIER UNIT	UMHUE	
56	2B-D	*	X08-2050-81	PREAMPLIFIER UNIT	X	
56	2B-D	*	X08-2052-71	PREAMPLIFIER UNIT	E	
57	2B, 2C	*	X11-1880-00	CONTRØL UNIT	UMHUE	
57	2B, 2C	*	X11-1880-00	CONTRØL UNIT	XT	
57	2B, 2C	*	X11-1882-71	CONTRØL UNIT	E	
POWER SUPPLY (X00-2230-21)						
△ C1 -6			CK45E2H103P	CERAMIC 0.01UF P		
△ C19			C91-0079-05	CERAMIC 0.01UF AC125V	TE	
△ F1 .2	1B		F05-4022-05	FUSE 250V 4A	UMHUE	
△ F1 .2	1B		F05-4022-05	FUSE 250V 4A	X	
△ F1 .2	1B		F05-4024-05	FUSE (SEMKØ) 250V F4A	TE	
△ F3 .4	1B		F05-2023-05	FUSE 250V 2A	UMHUE	
△ F3 .4	1B		F05-2023-05	FUSE 250V 2A	X	
△ F3 .4	1B		F05-2029-05	FUSE (SEMKØ) 250V F2A	TE	
111	1B		J13-0041-05	FUSE CLIP	UMHUE	
111	1B		J13-0041-05	FUSE CLIP	X	
111	1B		J13-0054-05	FUSE CLIP	TE	
R1 .2			RD14GB2E391JMA	FL-PROOF RD 390 J 2E		
△ R3			RS14GB3D220JMA	FL-PROOF RS 22 J 3D		
R4			RS14GB3D220JMA	FL-PROOF RS 22 J 3D		
△ R5		*	RD14GB2E2R2JMA	FL-PROOF RD 2.2 J 2E		
R6 .7			RD14GB2E221JMA	FL-PROOF RD 220 J 2E		
△ R8			RD14GB2E4R7JMA	FL-PROOF RD 4.7 J 2E		
△ R9			RS14GB3D820JMA	FL-PROOF RS 82 J 3D		
R10			RS14GB3A152JMA	FL-PROOF RS 1.5K J 3A		
△ R11			RD14GB2E4R7JMA	FL-PROOF RD 4.7 J 2E		
R12			RS14GB3A332JMA	FL-PROOF RS 3.3K J 3A		
R13			RS14GB3D122JMA	FL-PROOF RS 1.2K J 3D		
D1		*	S15VB20	DIØDE (BRIDGE RECTIFIER)		
D2			M4C-41-12*1	DIØDE (BRIDGE RECTIFIER)		

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△ D2		*	M4C-42-12*1	DIODE (BRIDGE RECTIFIER)		
D3 -7			WD6B	DIODE		
△ D8			WZ-250	ZENER DIODE		
△ D9			WZ-310	ZENER DIODE		
△ D10			WZ-125	ZENER DIODE		
Q1 -3			2SD313V-AL	TRANSISTOR		
Q4			2SC2320	TRANSISTOR		
Q4			2SC945(A)	TRANSISTOR		
POWER AMPLIFIER (X07-2030-00)						
C1 ,2			CC45FSL1H101J	CERAMIC 100PF J		
C3 ,4			CC45FSL1H470J	CERAMIC 47PF J	E	
C5 ,6		*	CK45FB1H221K	CERAMIC 220PF K	E	
C5 ,6		*	CK45FB1H561K	CERAMIC 560PF K	UMHUE	
C5 ,6		*	CK45FB1H561K	CERAMIC 560PF K	XT	
C7 ,8			CK45FB1H102K	CERAMIC 0.001UF K		
C9 -12		*	CE04FW1J010MEL	ELECTRO 1.0UF 63WV		
C13 ,14		*	CK45B2H561K	CERAMIC 560PF K		
C15 ,16			CC45SL2H220J	CERAMIC 22PF J	E	
C15 ,16			C91-0170-05	POLYSTY 22PF K	UMHUE	
C15 ,16			C91-0170-05	POLYSTY 22PF K	XT	
C19		*	CC45FSL1H560J	CERAMIC 56PF J		
C20		*	CC45FSL1H560J	CERAMIC 56PF J		
C21 ,22			CC45FSL1H010C	CERAMIC 1.0PF C		
C25 ,26			CC45FSL1H680J	CERAMIC 68PF J	E	
C25 ,26			C91-0176-05	POLYSTY 68PF K	UMHUE	
C25 ,26			C91-0176-05	POLYSTY 68PF K	XT	
C27 ,28			CC45FSL1H151J	CERAMIC 150PF J	UMHUE	
C27 ,28			CC45FSL1H151J	CERAMIC 150PF J	XT	
C29 -32			CK45FB1H561K	CERAMIC 560PF K		
C45 -48		*	CQ93FM1H104J	MYLAR 0.10UF J	E	
C45 ,46		*	CQ93FM1H473J	MYLAR 0.047UF J	UMHUE	
C45 ,46		*	CQ93FM1H473J	MYLAR 0.047UF J	XT	
C49 ,50		*	CE04HW1E4R7MEL	NP-ELEC 4.7UF 25WV		
C51 ,52		*	CQ93FM1H334J	MYLAR 0.33UF J		
C53 -56		*	CQ93FM1H683J	MYLAR 0.068UF J	E	
C53 ,54		*	CQ93FM1H333J	MYLAR 0.033UF J	UMHUE	
C53 ,54		*	CQ93FM1H333J	MYLAR 0.033UF J	XT	
C57 -60			CK45FB1H472K	CERAMIC 4700PF K	E	
C66		*	CE04HW1A470MEL	NP-ELEC 47UF 10WV		
C69		*	CE04GW1C470MEL	LL-ELEC 47UF 16WV		
C70 ,71		*	C90-1235-05	ELECTRO 12000UF 50WV		
C72 ,73		*	C90-1234-05	ELECTRO 12000UF 90WV		
C74			CC45FSL1H271J	CERAMIC 270PF J		
-			J61-0045-15	WIRE BAND		
L1 ,2			L33-0275-05	CHOKER COIL		
L3 ,4			L39-0085-05	PHASE-COMPENSATION COIL		
211	1B		ND9-0287-05	SEMS SCREW (VARISTOR)		
212	1B, 1C		ND9-1202-05	TAPPING SCREW (POWER TR)		
R39 ,40			RD14GB2E221JTS	FL-PROOF RD 220 J 2E		
R41 ,42			RD14GB2E561JTS	FL-PROOF RD 560 J 2E		
R43 -46			RD14GB2E681JTS	FL-PROOF RD 680 J 2E		
R51 -54			RD14GB2E331JTS	FL-PROOF RD 330 J 2E		
△ R59 -62			RD14GB2E561JTS	FL-PROOF RD 560 J 2E		

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△ R63 -66			RD14GB2E151JTS	FL-PROOF RD 150 J 2E		
△ R67 -82			RD14GB2E220JTS	FL-PROOF RD 22 J 2E		
△ R83 -86			R90-0187-05	MULTI-COMP 0.22X2 K 3H		
R111,112		*	RS14GB3D100JMA	FL-PROOF RS 10 J 3D		
R113,114			RN92BC2E133F	RN 13K F 2E		
R115,116			RN92BC2E153F	RN 15K F 2E		
R117,118			RS14GB3A2R7JMA	FL-PROOF RS 2.7 J 3A		
R119,120			RD14GB2E330JTS	FL-PROOF RD 33 J 2E		
R121,122			RS14GB3D100JMA	FL-PROOF RS 10 J 3D		
R123,124			RS14GB3D681JMA	FL-PROOF RS 680 J 3D		
R127		*	RD14GB2E152JTS	FL-PROOF RD 1.5K J 2E		
R128			RS14GB3A122JMA	FL-PROOF RS 1.2K J 3A		
△ R129			RD14GB2E4R7JTS	FL-PROOF RD 4.7 J 2E		
R130			RD14GB2E4R7JTS	FL-PROOF RD 4.7 J 2E		
R131			RD14GB2E4R7JTS	FL-PROOF RD 4.7 J 2E	E	
△ R132			RD14GB2E4R7JTS	FL-PROOF RD 4.7 J 2E	E	
R140			RS14GB3D122JMA	FL-PROOF RS 1.2K J 3D		
VR1 ,2			R12-0502-05	TRIMMING PNT. 100 (OFFSET)		
VR3 ,4			R12-0302-05	TRIMMING PNT. 500 (IDLING)		
RL1 ,2			S51-2045-05	MAGNETIC RELAY		
S1	2C	*	S90-0068-05	SLIDE SWITCH (SPEAKER)		
△ TS1	1C	*	S59-1061-05	THERMAL SWITCH (130 °C)		
D1 ,2			1S2076	DIODE		
D3 -6			1S2076	DIODE		
△ D7 ,8		*	STV-2H	VARIATOR		
D9 -12			UF-21	DIODE		
D13 ,14			1S2076A	DIODE		
D15 ,16		*	RD24J(B2,B3)	ZENER DIODE		
D17			1S2076	DIODE		
D18		*	RD5.6J(B1)	ZENER DIODE		
D19			E-102	CONSTANT CURRENT DIODE		
D20		*	RD16J(B2)	ZENER DIODE		
D21			RD22J(B2)	ZENER DIODE		
D22 -25			1S2076A	DIODE		
IC1 ,2			TA2030	IC (SWITCHING)		
IC3			UPC1237H	IC (PROTECTION)		
Q1 ,2			UPA68H(K,L)	DUAL FET		
Q3 -8			2SC1845	TRANSISTOR		
Q9 ,10			UPA75V(F,E)	DUAL TRANSISTOR		
Q11 ,12			2SC2632(Q,R,S)	TRANSISTOR		
Q13 ,14		*	2SC2632A	TRANSISTOR		
Q15 ,16			2SC2632(Q,R,S)	TRANSISTOR		
Q17 ,18		*	2SA1124A	TRANSISTOR		
Q19 ,20			2SC1841	TRANSISTOR		
Q21 ,22		*	2SC2631A	TRANSISTOR		
Q23 ,24		*	2SA1123A	TRANSISTOR		
Q25 ,26		*	2SC2592	TRANSISTOR		
Q27 ,28		*	2SA1112*1	TRANSISTOR		
△ Q29 ,30		*	DAT1018N	TRANSISTOR		
△ Q29 ,30		*	DAT2101	TRANSISTOR		
△ Q31 ,32		*	DAT1018P	TRANSISTOR		
△ Q31 ,32		*	DAT2201	TRANSISTOR		
△ Q33 ,34		*	DAT1018N	TRANSISTOR		
△ Q33 ,34		*	DAT2101	TRANSISTOR		

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D4			1S1555	DIODE		
D4			1S2076	DIODE		
D5 ,6		*	MA27W(A)	VARISTOR		
△ D7 ,8		*	RD24J(B3)	ZENER DIODE		
D9 -12			W06B	DIODE		
D13			1S1555	DIODE		
D13			1S2076	DIODE		
IC1 ,2			TA2010A	IC (EQ AMP)		
Q1 ,2			2SK240(V)	FET		
Q5 -12			2SC2557(S,T)	TRANSISTOR		
Q13 -16			2SK301(Q,R)	FET		
Q17 ,18			2SC2003(L,K)	TRANSISTOR		
Q19 ,20			2SA954(L,K)	TRANSISTOR		
Q21			2SD313V-AL	TRANSISTOR		
Q22			2SB514(E,F)	TRANSISTOR		
Q23 ,24			2SK105(H)	FET		
Q23 ,24		*	2SK105A(2)	FET		
Q27 -30			2SC945(A)(Q,P)	TRANSISTOR		
Q31 ,32		*	2SD571(L,K)	TRANSISTOR		
Q33 -38			2SC945(A)(Q,P)	TRANSISTOR		
Q39			2SA992(F,E)	TRANSISTOR		
Q40 -44			2SC945(A)(Q,P)	TRANSISTOR		
Q45 ,46		*	2SD571(L,K)	TRANSISTOR		
CONTROL (X11-1882-71)						
C1 ,2			CQ93AP2A224J	POLYPR0 0.22UF J		
C3 ,4			C91-0088-05	POLYSTY 100PF K		
C5 ,6			CQ93FM1H333J	MYLAR 0.033UF J		
C7 ,8			CQ93FM1H683J	MYLAR 0.068UF J		
C9 ,10			C91-0166-05	POLYSTY 10PF D	UMHUE	
C9 ,10			C91-0166-05	POLYSTY 10PF D	XT	
C9 ,10			C91-0170-05	POLYSTY 22PF K	E	
C11 ,12			CK45FB1H152K	CERAMIC 1500PF K	UMHUE	
C11 ,12			CK45FB1H152K	CERAMIC 1500PF K	XT	
C11 ,12			CK45FB1H222K	CERAMIC 2200PF K	E	
C13 ,14			C91-0095-05	POLYSTY 390PF J		
C15 ,16		*	CK45FB1H272K	CERAMIC 2700PF K	E	
C15 ,16			CK45FB1H681K	CERAMIC 680PF K	UMHUE	
C15 ,16			CK45FB1H681K	CERAMIC 680PF K	XT	
C17 ,18			C91-0090-05	POLYSTY 150PF J	UMHUE	
C17 ,18			C91-0090-05	POLYSTY 150PF J	XT	
C17 ,18			C91-0095-05	POLYSTY 390PF J	E	
C19 ,20			CC45FSL1H470J	CERAMIC 47PF J		
C21 -26			CQ93FM1H334J	MYLAR 0.33UF J		
C27 -30			CQ93FM1H562J	MYLAR 5600PF J		
C37 ,38			CC45FSL1H101J	CERAMIC 100PF J		
C39 ,40			CQ93FM1H102J	MYLAR 0.001UF J		
C41 ,42			CC45FSL1H220J	CERAMIC 22PF J		
C43 ,44		*	CE04HW1E470MEL	NP-ELEC 47UF 25WV		
C45 ,46			CC45FSL1H101J	CERAMIC 100PF J	E	
C47 ,48		*	CQ93FM1H273J	MYLAR 0.027UF J		
C71 ,72			CK45FF1H103Z	CERAMIC 0.01UF Z		
C73			CK45FB1H152K	CERAMIC 1500PF K		
C74			CC45FSL1H470J	CERAMIC 47PF J		
C84 ,85			CK45FF1H223Z	CERAMIC 0.022UF Z		

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4			2SA733(A)(Q,P)	TRANSISTOR		
5,16			2SC945(A)(Q,P)	TRANSISTOR		
7,18			2SC2320(E,F,G)	TRANSISTOR		
7,18			2SC945(A)(P,K)	TRANSISTOR		
9			2SC945(A)(Q,P)	TRANSISTOR		
10			2SC2003	TRANSISTOR		
11			2SC1845(F,E)	TRANSISTOR		
12			2SC2167	TRANSISTOR		
13			2SC945(A)(Q,P)	TRANSISTOR		

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Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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Q35 ,36		*	DAT1018P	TRANSISTOR		
Q35 ,36		*	DAT2201	TRANSISTOR		
Q37 ,38			2SC2320	TRANSISTOR		
Q39 -42			2SA999	TRANSISTOR		
Q43 ,44		*	2SC2631A	TRANSISTOR		
Q45			2SA988	TRANSISTOR		
Q46			2SC2632(Q,R,S)	TRANSISTOR		
Q47			2SA957	TRANSISTOR		
POWER AMPLIFIER (X08-2050-51)						
D14 -18	2B		B30-0434-05	LED(SLP-175D-50) (SELECTOR)		
C1 -12		*	CC45FSL1H121J	CERAMIC 120PF J	E	
C15 ,16			CK45FB1H681K	CERAMIC 680PF K		
C17 ,18			CC45FSL1H271J	CERAMIC 270PF J		
C19 -22			CK45FB1H222K	CERAMIC 2200PF K	E	
C23 ,24			CC45FSL1H050C	CERAMIC 5.0PF C		
C25 ,26			CC45FSL1H101J	CERAMIC 100PF J		
C27 ,28			CC45FSL1H221J	CERAMIC 220PF J		
C29 ,30			CK45FB1H152K	CERAMIC 1500PF K		
C33 ,34		*	CQ93AP2A683GMA	MYLAR 0.068UF G		
C35 ,36		*	CQ93AP2A332GMA	MYLAR 3300PF G		
C37 ,38		*	CQ93AP2A203GMA	MYLAR 0.020UF G		
C45 ,46		*	CK45FB1H102K	CERAMIC 0.001UF K		
C49 ,50		*	CE04HW1H4R7MEL	NP-ELEC 4.7UF 50WV		
C51 ,52		*	CQ09S1H331J	POLYSTY 330PF J		
C53 ,54		*	CQ93FM1H103J	MYLAR 0.010UF J		
C59 ,60		*	CE04HW1H3R3MEL	NP-ELEC 3.3UF 50WV		
C67 ,68		*	CE04HW1H3R3MEL	NP-ELEC 3.3UF 50WV		
C76		*	CK45FB1H102K	CERAMIC 0.001UF K		
C77 ,78			CC45FSL1H101J	CERAMIC 100PF J	E	
310	2D		E06-0513-05	REC/PLAY JACK	TE	
311	2B		E11-0093-05	PHONE JACK		
-			E40-0356-05	SOCKET FOR PIN ASSY		
E1 ,2			E13-0814-05	PHONE JACK		
E3		*	E13-0492-05	PHONE JACK		
L1 ,2			L40-1011-43	SMALL FIXED INDUCTOR	E	
R29 ,30		*	RN14BK2E820JHD	RN 82 J 2E		
R39 ,40		*	RN14BK2E3R3JHD	RN 3.3 J 2E		
R41 ,42		*	RN14BK2E4532GHD	RN 45K 2 2E		
R43 ,44		*	RN14BK2E3741GHD	RN 370K 1 2E		
R45 ,46			RD14GB2E101JTS	FL-PROOF RD 100 J 2E		
R55 -58			RD14GB2E100JTS	FL-PROOF RD 10 J 2E		
R63 -66			RS14GB3A101JMA	FL-PROOF RS 100 J 3A		
R127 ,128			RS14GB3D561JMA	FL-PROOF RS 560 J 3D		
RL1		*	S51-2061-05	REED RELAY		
S1		*	S90-0064-05	ELECTROMAGNETIC SW (PHONE 1/2)		
S2		*	S90-0065-05	ELECTROMAGNETIC SW (MM/MC)		
S3	2B	*	S42-2082-05	MULTIPLE PUSH SW (MM/MC)		
S4	1D	*	S31-2059-05	SLIDE SWITCH (PHONE IMPEDANCE)		
S5	2D		S90-0038-05	SLIDE SWITCH (REC OUT SELECT)		
S6	2B		S42-5033-05	MULTIPLE PUSH SW (SELECTOR)		
D1 -3			1S1555	DIODE		
D1 -3			1S2076	DIODE		

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D4			1S1555	DIODE		
D4			1S2076	DIODE		
D5 ,6		*	MA27W(A)	VARISTOR		
△ D7 ,8		*	RD24J(B3)	ZENER DIODE		
D9 -12			W06B	DIODE		
D13			1S1555	DIODE		
D13			1S2076	DIODE		
IC1 ,2			TA2010A	IC (EQ AMP)		
Q1 ,2			2SK240(V)	FET		
Q5 -12			2SC2557(S,T)	TRANSISTOR		
Q13			2SK301(Q,R)	FET		
Q17 ,18			2SC2003(L,K)	TRANSISTOR		
Q19 ,20			2SA954(L,K)	TRANSISTOR		
Q21			2SD313V-AL	TRANSISTOR		
Q22			2SB514(E,F)	TRANSISTOR		
Q23 ,24			2SK105(H)	FET		
Q23 ,24		*	2SK105A(2)	FET		
Q27 -30		*	2SC945(A)(Q,P)	TRANSISTOR		
Q31 ,32		*	2SD571(L,K)	TRANSISTOR		
Q33 -38		*	2SC945(A)(Q,P)	TRANSISTOR		
Q39			2SA992(F,E)	TRANSISTOR		
Q40 -44			2SC945(A)(Q,P)	TRANSISTOR		
Q45 ,46		*	2SD571(L,K)	TRANSISTOR		
CONTROL (X11-1882-71)						
C1 ,2			CQ93AP2A224J	POLYPR0 0.22UF J		
C3 ,4			C91-0088-05	POLYSTY 100PF K		
C5 ,6			CQ93FM1H333J	MYLAR 0.033UF J		
C7 ,8			CQ93FM1H683J	MYLAR 0.068UF J		
C9 ,10			C91-0166-05	POLYSTY 10PF D	UMHUE	
C9 ,10			C91-0166-05	POLYSTY 10PF D	XT	
C9 ,10			C91-0170-05	POLYSTY 22PF K	E	
C11 ,12			CK45FB1H152K	CERAMIC 1500PF K	UMHUE	
C11 ,12			CK45FB1H152K	CERAMIC 1500PF K	XT	
C11 ,12			CK45FB1H222K	CERAMIC 2200PF K	E	
C13 ,14			C91-0095-05	POLYSTY 390PF J		
C15 ,16		*	CK45FB1H272K	CERAMIC 2700PF K	E	
C15 ,16			CK45FB1H681K	CERAMIC 680PF K	UMHUE	
C15 ,16			CK45FB1H681K	CERAMIC 680PF K	XT	
C17 ,18			C91-0090-05	POLYSTY 150PF J	UMHUE	
C17 ,18			C91-0090-05	POLYSTY 150PF J	XT	
C17 ,18			C91-0095-05	POLYSTY 390PF J	E	
C19 ,20			CC45FSL1H470J	CERAMIC 47PF J		
C21 -26			CQ93FM1H334J	MYLAR 0.33UF J		
C27 -30			CQ93FM1H562J	MYLAR 5600PF J		
C37 ,38			CC45FSL1H101J	CERAMIC 100PF J		
C39 ,40			CQ93FM1H102J	MYLAR 0.001UF J		
C41 ,42			CC45FSL1H220J	CERAMIC 22PF J		
C43 ,44		*	CE04HW1E470MEL	NP-ELEC 47UF 25WV		
C45 ,46			CC45FSL1H101J	CERAMIC 100PF J	E	
C47 ,48		*	CQ93FM1H273J	MYLAR 0.027UF J		
C71 ,72			CK45FF1H103Z	CERAMIC 0.01UF Z		
C73			CK45FB1H152K	CERAMIC 1500PF K		
C74			CC45FSL1H470J	CERAMIC 47PF J		
C84 ,85			CK45FF1H223Z	CERAMIC 0.022UF Z		

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UE: AAFES(Europe) X: Australia M: Other Areas

P: Canada

△ indicates safety critical components.

PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C86 C87			CK45FB1H102K CK45FF1H223Z	CERAMIC 0.001UF K CERAMIC 0.022UF Z		
- -			E13-0213-05 E23-0125-05	PHONE JACK TERMINAL		
R1 ,2 R3 ,4 R5 ,6 R13 ,14 R15 ,16			RN14DK2E472JHD RN14DK2E331JHD RN14DK2E562JHD RN14DK2E101JHD RN14DK2E274JHD	RN 4.7K J 2E RN 330 J 2E RN 5.6K J 2E RN 100 J 2E RN 270K J 2E		
R37 ,38 R39 ,40 R41 ,42 R47 ,48 R123		*	RN92BC2E301F RN92BC2E162F RN92BC2E151F RN14DK2E101JHD RD14GB2E150J	RN 300 F 2E RN 1.6K F 2E RN 150 F 2E RN 100 J 2E FL-PROOF RD 150 J 2E		
R128 R129 R130			RS14GB3A471JMA RS14GB3D331JMA RS14GB3D391JMA	FL-PROOF RS 470 J 3A FL-PROOF RS 330 J 3D FL-PROOF RS 390 J 3D		
VR1 VR2	3B 2B	*	R06-5098-05 R11-9015-05	POTENTIOMETER (CLICK) BALANCE POTENTIOMETER VOLUME CONTROL		
VR3 ,4 VR5 ,6	2B		R06-3032-05 R12-0502-05	POTENTIOMETER (CLICK) BASS, TREB TRIMMING POT. 100 (OFFSET)		
RL1 S1 S2 S3 S4	2B 2B 2B 2B	*	S51-2041-05 S42-2082-05 S29-2026-05 S29-2025-05 S42-3064-05	MAGNETIC RELAY MULTI. PUSH SW (MODE, SUBSONIC) ROTARY SWITCH (LOUD LEVEL) ROTARY SWITCH (LOUD FREQ) MULTI. PUSH SW (TONE, FREQ SW)		
S5 S6	3B 3B		S40-1065-05 S40-2122-05	PUSH SWITCH (FADER) PUSH SW (AUX/DAD FRONT/REAR)		
PHC1			T95-0006-05	OPTO ISOLATOR		
D1 ,2 D3 -6 D3 -6 D3 -6 D3 -6			RD5.6J(B1) 1N60 1S1555 1S1555 1S2076	ZENER DIODE DIODE DIODE DIODE DIODE	E UMHUE XT UMHUE	
D3 -6 D11 -21 D11 -21 D22 D23 ,24		*	1S2076 1S1555 1S2076 RD8.2J(B2) WZ-135	DIODE DIODE DIODE ZENER DIODE ZENER DIODE	XT	
D25 ,26 D27 ,28 D27 ,28 IC1 ,2 IC3		*	BZ-197 1S1555 1S2076 TA7322P NJM2041D-D	ZENER DIODE DIODE DIODE IC (FLAT AMP) IC (TONE AMP)		
IC4 IC4 Q1 ,2 Q3 -6 Q7 ,8		*	TC4027BP UPD4027BC UPA68H(L,M) 2SC1845(F,E) 2SC2291(F,G)	IC (J-K FLIP-FL0P) IC (J-K FLIP-FL0P) DUAL FET TRANSISTOR DUAL TRANSISTOR		
Q11 ,12 Q11 ,12 Q13			2SC2320(E,F,G) 2SC945(A)(P,K) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR		

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
Q14 Q15 ,16 Q17 ,18 Q17 ,18 Q19			2SA733(A)(Q,P) 2SC945(A)(Q,P) 2SC2320(E,F,G) 2SC945(A)(P,K) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q20 Q21 Q22 Q23			2SC2003 2SC1845(F,E) 2SC2167 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		

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Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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